

# Health-Related Quality of Life among People Receiving Smoking Cessation Services

Siriwan Pitayangsarit, Sunida Preechawong\*, Thanawat Wongphan, Suthat Rungruanghiranya

**Abstract:** Few studies have addressed health-related quality of life and smoking cessation although known improvements can encourage smokers to quit. This cross-sectional study examined smoking quit rates and health-related quality of life among smokers receiving cessation services in ten Quit Clinic Hospitals throughout Thailand. A random sample of 715 smokers participated in the study. Data were collected from medical records and via telephone interviews from March to July 2015. Research instruments included demographic questions, a smoking screening form, the Quit Smoking Questionnaire; and the EuroQol-5 Dimensions 5 Levels Questionnaire (Thai version). Data were analyzed using descriptive statistics, Chi-square, and independent sample t-test.

Most participants (97.1%) were male and between 25 and 64 years of age. Most had heaviness of smoking index scores less than four, indicating low nicotine dependence. The self-reported continuous abstinence rate at 6-months was 40.5%. The participants who stopped smoking by 6 months had higher average scores on the health-related quality of life than those who continued to smoke. As nurses are recognized as influential persons in the health care team, they can implement tobacco cessation interventions through a variety of strategies, such as providing brief advice, and referring for advanced treatment. Likewise, nurses need to consider assessing health-related quality of life of smokers and use such information to advocate smokers to quit.

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## Introduction

Non-communicable diseases (NCDs) such as cancer, cardiovascular disease and diabetes are global health threats to sustainable development. Many international health organizations have realized this and worked collaboratively to address these health concerns. To date, a number of strategies and action plans to prevent and control NCDs have been established<sup>1</sup>, for instance, the Global Action Plan for

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the Prevention and Control of NCDs 2013 – 2020, WHO ‘Best Buys’ for NCDs. These actions focus

mainly on four behavioral risk factors: tobacco use, harmful use of alcohol, unhealthy diet, and physical inactivity. Tobacco use still remains a significant health issue in Thailand due to smoking-related morbidity and mortality and a slow decline in smoking prevalence.<sup>2</sup> Although the number of smokers in Thailand has been decreasing, there still are 10.7 million smokers as reported by the Thai National Statistical Office in 2017<sup>3</sup> which surveyed the smoking and alcohol consumption of Thai people aged 15 years and older. This number is still high since the target is to reduce smoking by 30%<sup>4</sup> or to reach a prevalence of 15.75% or lower. This goal is what Thailand has agreed to achieve in the WHO Global Action Plan for the Prevention and Control of NCDs 2013 – 2020 and the 5-Year National NCD Prevention and Control Strategic and Action Plan (2017 – 2021).<sup>5</sup> In addition, the economic burden of smoking-related causes has been estimated at 74.88 billion THB (US\$2.18, 95% CI US\$2.17 to US\$2.19 billion), approximately 0.78% of GDP, while the tobacco industry only generated an estimated 0.50% of GDP.<sup>6</sup>

The World Health Organization (WHO) has recommended all member countries implement effective measures to curb tobacco use. For instance, Article 14 of the WHO Framework Convention on Tobacco Control (FCTC) recognizes tobacco dependence treatment and cessation as one of the key demand-reduction measures. The WHO FCTC Article 14 guidelines also recognize the important roles that health professionals, including nurses, play in the delivery of tobacco cessation interventions.<sup>7</sup> While there is strong evidence to suggest the effectiveness and affordability of smoking cessation interventions<sup>8</sup>, the WHO recommended three types of clinical interventions: cessation advice in primary health care system, quit lines, and pharmacological therapy.<sup>9</sup> Systematic reviews have shown that the provision of tobacco cessation interventions by nurses, e.g. brief advice, counseling, and/or strategies to help people quit smoking, significantly increased the likelihood of quitting.<sup>10,11</sup> The International Council

of Nurses also encourages nurses to “...integrate tobacco use prevention and cessation ... as part of their regular nursing practice.”<sup>12</sup>

In an effort to comply with Article 14, Thailand, as a state party of the WHO FCTC, has included the promotion of cessation and reduction of tobacco use in the last two National Strategic Plans for Tobacco Control, 2012–2014 and 2016 – 2019. Over the past decade, there has been more attention given to the provision of tobacco dependence treatment in Thailand. For instance, capacity building efforts in smoking cessation counseling have been arranged for health professionals, including nurses, to increase the delivery of tobacco dependence treatment in clinical practice.<sup>13</sup> Since 2013, Thailand has been recognized as an upper-middle-income country of 65 million people that provides access to free services for smoking cessation, including a toll-free national quit line.<sup>9</sup> In addition, the “Fa-sai Clinic” or the Smart Quit Clinics Network, initiated by the Thai Physicians Alliance against Tobacco, was launched in 2011 to provide smoking cessation treatment in community and general hospitals. Currently, over 500 hospitals nationwide have become network members. However, no evidence existed to support the effectiveness of the SMART Quit Clinic Network. Such information is vital for policy makers’ decision making in funding smoking cessation services. Likewise, despite numerous research studies reporting economic and health benefits of smoking cessation, only a few studies have addressed health-related quality of life (HRQL) and smoking cessation.<sup>14-16</sup> Evidence of the influence of smoking cessation on quality of life can be useful in encouraging smokers to quit. However, in Thailand, HRQL among people by smoking status after receiving cessation advice is limited.

## **Review of literature**

### *The SMART Quit Clinics Network:*

The Smart Quit Clinic Network, as known as the Fah-sai Clinic, sponsored by the Thai Health

Promotion Foundation, provides comprehensive smoking cessation services in hospitals. At the beginning, only five clinics in Bangkok metropolitan area joined the program. Currently, 552 hospitals have joined the Network covering 77 provinces across Thailand. The network program offers free-of-charge training, a breath carbon monoxide (CO) monitor, a smoked lung model, and medications for smoking cessation, such as nicotine gum, bupropion to each hospital network member. The Fah-sai Clinic is mainly operated by trained nurses with physician consultation if needed. The treatment protocol for Fah-sai Clinic includes assessment of smoking status and nicotine dependence, provision of smoking cessation brief advice or intensive counseling, or provision of smoking cessation medication with indications. During the first five year of operation, it was reported that six-month continuous abstinence rate ranged from 6.5% to 34.5%.<sup>17</sup>

#### *Smoking cessation and Health Related Quality of Life:*

Health-related quality of life (HRQL) reflects a person's evaluation of his/her physical, psychological and social functioning in relation to health.<sup>18</sup> HRQL data can be used as an interventional tool to encourage smoking cessation, tailor cessation plan, and improve smoking quit rates.<sup>19</sup> Previous studies reported HRQL and smoking cessation using different measures of HRQL. In the two Nurses' Health Study (NHS) cohorts, Sarna et al.<sup>14</sup> reported lower HRQL in both physical and mental components among continuing smokers as compared to former and those who had never smoked (termed never smokers). Likewise, among smokers calling the Thailand National Quitline, using the Short Form-12 Health Survey (Version 2), the average score of HRQL physical component was 50.62 (SD=8.96), while the mental component was 54.91 (SD= 9.27). The participants who stopped smoking over 3 and 6 months had higher average score of HRQL in both physical and mental components than those who continued to smoke.<sup>20, 21</sup>

A prospective cohort study, using the disease-specific questionnaire, the St. George's Respiratory Questionnaire found improvement in HRQL after only a 3-month smoking cessation program, regardless of quit status.<sup>18</sup> Nevertheless, no significant difference in HRQL between quitters and continuous smokers were detected.<sup>18</sup> In west Iran a cross-sectional study involving 1,543 participants assessed HRQL using the EuroQol 5 Dimensions 3 Level (EQ-5D-3L) Questionnaire. The results showed that current smokers had significantly lower HRQL compared to the past and never smokers.<sup>15</sup> Likewise, a longitudinal study in Taiwan by Chen et al.<sup>22</sup> assessed HRQL, using the EQ-5D, in smokers one year after participation in a smoking cessation program. This study indicated that the participants who quit for 1 year or for 6 months experienced less anxiety and depression than did continuing smokers. Levy et al.<sup>16</sup> examined HRQL among hospitalized smokers, using the 5-level EQ-5D version. They reported a strong association between smoking abstinence and improvements in HRQL, at 6 months post-discharge.

#### **Study aim**

To examine smoking quit rates among smokers receiving services from quit-clinic hospitals in Thailand and to compare the HRQL between the participants who could quit smoking by six months and those who continued to smoke.

## **Methods**

**Design:** A cross-sectional descriptive study

**Sample and Setting:** The population consisted of smokers who received smoking cessation services from the ten hospitals in the Smart Quit Clinic Network. A random sample of 1,000 clients from ten selected hospitals who met inclusion criteria were invited to take part. The hospitals were purposively chosen based on adequacy of reports and the number of clients (more than 300 clients per year). Client eligibility included

those who first visited the cessation clinic from January to June 2014 (at least 6 months before data collection period), received a 20- to 40-minute counseling session and at least one follow-up contact, and gave verbal consent for follow-up contact and telephone interview. Seven hundred and fifteen smokers participated in this study and the response rate was 71.5%

**Ethical Considerations:** Approval to conduct the study was obtained from the Ethics Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (COA no 200.1/57). Verbal consent was obtained from each potential participant prior to data collection. Each participant was informed about the purpose of the study, and their rights to confidentiality and anonymity, as well as being able to terminate their study participation at any time with no effect on their hospital services.

**Instruments:** The instruments for data collection included a demographic data form, a quit smoking questionnaire, and the Thai version of the EuroQol-5D-5L (EQ-5D-5L) questionnaire.

A *demographic data form* was developed based on a literature review. This form consisted of questions regarding personal data and smoking-related characteristics, including the number of cigarettes smoked daily, time of first cigarette after waking, motivation to quit smoking, the type of tobacco products used, and self-confidence to quit smoking. This information was obtained from participants' medical records before the interview.

*The Quit Smoking Questionnaire* was self-reported and assessed participant's smoking status. This questionnaire was modified from the version in previous studies.<sup>20, 21</sup> The participants were asked the opening question: "Currently, do you smoke cigarettes?". If the answer to this was "No", they were asked: "During the past seven days, did you continuously abstain from smoking?", and "Have you continuously abstained from smoking for 3 months, and 6 months." If the answer to the first question was "Yes", participants were asked whether they had made any quit attempt (24-hour abstinence) after receiving cessation counseling, and the longest duration of the previous quit attempt.

The Thai version of the EuroQol 5-dimensions 5-level (EQ-5D-5L) was used to measure HRQL with permission from the EuroQol Research Foundation. This instrument is a standardized tool for the measurement of generic HRQL and has been widely used worldwide in a variety of research fields due to its practical, reliable, and valid.<sup>23-25</sup> It has two parts: a descriptive profile and a visual analog scale (EQ-VAS). The first part includes five dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has five levels of response, covering no problem (level 1), slight problems (level 2), moderate problems (level 3), severe problems (level 4), and extreme problems (level 5). A total of 3,125 possible health states can be identified by combining one level from each dimension, ranging from (full health) to 55555 (worst health).<sup>23-25</sup> After a participant answers the questionnaire, their health state can be identified using a five-digit number. For instance, a health state in which a person has moderate problem in mobility, slight problems in self-care, slight problems in usual activities, no problems in pain/discomfort, and no problems in anxiety/depression can be coded as 32211. Then, each health state can be converted to the EQ-5D-5L index score based on the Thai value set of EQ-5D-5L<sup>26</sup> that can be downloaded from the Health Intervention and Technology Assessment Program (HiTAP) website.<sup>27</sup> The Thai EQ-5D-5L index scores range from -0.283 to 1.00, where 1.00 and 0 represent perfect health and death, respectively, with negative values indicating states worse than death.<sup>24, 26</sup> The second part is a visual analogue scale (EQ-VAS) which assesses health status, ranging from 0 to 100, where 0 describes the worst and 100 the best possible condition. Previous studies showed good psychometric properties of EQ-5D-5L, Thai version.<sup>24, 26, 28</sup> In this study, the Cronbach's alpha value of the first part of the EQ-5D-5L was 0.83.

#### **Data collection**

Data were collected by a research assistant (RA) from each hospital site. Ten RAs, registered nurses working in the Fa-sai clinic and having experiences in smoking cessation counseling, were trained for data

collection. With permission from the director of each site, the list of potential participants was given to the principal investigator (PI) who randomly selected them. RAs performed a medical record review on each identified participant to collect personal data and smoking characteristics. Then, the RAs approached the participants by telephone, invited them to join the study, and interviewed them after verbal consent was given. The telephone interview was used to collect information related to smoking status and HRQL throughout March and July 2015, but 285 out of 1,000 identified participants were not able to be contacted after three phone attempts were made.

## **Data analysis**

Data analyses were performed using SPSS 22.0 statistical software (IBM SPSS Corp, Armonk, NY, USA). Descriptive statistics were performed for sample characteristics and the study variables. Participants who reported achieving six-month continuous abstinence were considered quitters, while the others were considered non-quitters. Comparison of the demographic characteristics between the quitter group and the non-quitter group were analyzed using the independent sample t-test for continuous variables or the chi-square test for categorical variables. Univariate covariance analyses (ANCOVA) were carried out to compare the HRQL (the EQ-VAS) between the quitters and non-quitters, while heaviness smoking index and age were included in the analysis as a covariate due to their being potential confounders.

## **Results**

### ***Baseline characteristics***

A total of 715 clients who received services from the selected SMART quit clinics agreed to participate in this study and their demographic and smoking characteristics are shown in Table 1. The majority (97.1%) were males, and the mean age of participants was 47.1 years (SD = 14.5 years). Equally 40% of participants were between 25-44 years and between 45-64 years. No significant differences in

age or having diseases were noted between the smokers and former smokers. About half of participants reported using manufactured cigarettes (54.8%). Data on number of cigarettes smoked daily and time of first cigarette upon waking were used to calculate the heaviness of smoking index (HSI) score. HSI is used extensively as a behavioral measure of nicotine dependence in previous studies.<sup>29,30</sup> The cutoff point for high nicotine dependence is a score of  $\geq 4$ .<sup>29</sup> In this study, the majority of participants had baseline HSI index scores  $< 4$ , indicating a low nicotine dependence before receiving cessation service. The participants indicated their motivation factors for quitting smoking, which included health concerns (53.0%), family request (58.9%), and advice from health professionals (25.9%). In addition, less than 25% of participants reported having self-confidence to quit smoking (Table 1).

### ***Smoking abstinence rate***

The outcome measure for smoking cessation in this study was the self-reported continuous abstinence rate at six months follow-up. Of the 715 participants, 40.6% achieved 6 months of continuous abstinence. There was no significant difference in 6-month abstinence rates among age groups. However, significant differences in occupation and time to first cigarette in the morning (at baseline) were observed between quitters and non-quitters (Table 1).

### ***Health-related quality of life***

Descriptive statistics of the EuroQol 5-dimensions-5-level (EQ-5D-5L), EQ-5D-5L index, and a visual analog scale (EQ-VAS) are reported in Table 2. The majority of participants had no problem with self-care (91.0%), mobility (81.1%), usual activities (79.6%), and anxiety or depression (71.2%). About 56.7% reported no problems from pain or discomfort. Unexpectedly, the proportion of those who reported 'slight' to 'severe' problems across the five dimensions was somewhat higher for the participants who were quitters than for those who continued to smoke. However, when performing chi-square tests, no significant differences were observed.

**Table 1.** Number and percentage of the participants by demographic and smoking characteristics

	Total		Quitters		Non-quitters		p-value
	n	%	n	%	n	%	
Gender							
Male	694	97.1	278	95.9	416	97.9	.116 <sup>a</sup>
Female	21	2.9	12	4.1	9	2.1	
Age (years)							
16 – 24	48	6.7	13	4.5	35	8.2	.137 <sup>b</sup>
25 – 44	284	39.8	115	39.8	169	39.8	
45 – 64	291	40.8	115	39.8	176	41.4	
> 64	91	12.7	46	15.9	45	10.6	
mean±SD	47.1±14.5		48.1±14.4		46.5±14.6		
Occupation							
Agriculturist	114	16.4	45	15.9	69	16.8	.034 <sup>a</sup>
Currently employed	433	62.4	176	62.2	257	62.5	
Unemployed	119	17.2	57	20.1	62	15.1	
Others (students, monks, etc.)	28	4.0	5	1.8	23	5.6	
Having health conditions	391	54.7	162	55.9	229	53.9	.602 <sup>a</sup>
Number of cigarettes smoked per day (baseline)							
1 – 10	335	46.9	140	48.3	195	45.9	.655 <sup>a</sup>
11 – 20	297	41.5	119	41.0	178	41.9	
21 – 30	64	9.0	22	7.6	42	9.9	
> 30	19	2.7	9	3.1	10	2.4	
Time to first cigarette in the morning (baseline)							
Within 5 minutes	185	26.0	56	19.4	129	30.5	.003 <sup>a*</sup>
6 – 30 minutes	206	28.9	89	30.8	117	27.7	
31 – 60 minutes	175	24.6	86	29.8	89	21.0	
> 60 minutes	146	20.5	58	20.1	88	20.8	
Heaviness of smoking index							
mean±SD	2.28±1.47		2.15±1.44		2.36±1.48		.06 <sup>b</sup>
Type of tobacco products							
Manufactured cigarettes	387	54.8	148	51.9	239	56.8	.060 <sup>a</sup>
Roll-your-own cigarette	139	19.7	51	17.9	88	20.9	
Both manufactured cigarette and Roll-your-own cigarette	180	25.5	86	30.2	94	22.3	
Motivation to quit smoking <sup>c</sup>							
Having health conditions	374	53.0	177	61.9	197	47.0	
Family request	421	58.9	167	57.6	254	59.8	
Advice from health professionals	185	25.9	66	22.8	119	28.0	
Smoking is wasteful	139	19.4	69	23.8	70	16.5	
Smoking is not good for health	99	13.8	43	14.8	56	13.2	
Having high self-confidence in quitting (baseline)	167	23.4	77	26.6	90	21.2	.090 <sup>a</sup>

Note: a tested via chi-Square test, b tested via t-test, c – more than one

In addition, the overall HRQL as measured by the mean EQ-5D-5L index value was  $0.93 \pm 0.12$  while mean EQ-VAS score was  $81.5 \pm \text{SD } 13.0$ . The mean EQ-5D-5L index scores for the non-quitters and the quitters were  $0.94 \pm \text{SD } 0.09$  and  $0.91 \pm \text{SD } 0.13$ , respectively (Table 2). This was an unexpected result. However, the participants who stopped smoking at

six months (the quitters) had higher average scores on EQ-VAS than those who continued to smoke ( $p\text{-value} < .05$ ). In addition, the results of ANCOVA showed a significant difference between the quitters and those continuing to smoke in the mean score of EQ-VAS after controlling for age and heaviness smoking index ( $F = 9.44, p < 0.05$ ). (Table 3).

**Table 2.** Comparison of the HRQL between quitter and non-quitter groups

EQ-5D Dimensions	Total		Quitters		Non-quitters	
	n	%	n	%	n	%
<b>Mobility</b>						
No problem	581	81.1	225	77.6	356	83.6
Slight problems	93	13.0	42	14.5	51	12.0
Moderate problems	28	3.9	15	5.2	13	3.1
Severe problems	11	1.5	6	2.1	5	1.2
Unable to walk	3	0.4	2	0.7	1	0.2
<b>Self-care</b>						
No problem	652	91.0	256	88.3	396	93.0
Slight problems	47	6.6	24	8.3	23	5.4
Moderate problems	13	1.8	7	2.4	6	1.4
Severe problems	4	0.6	3	1.0	1	0.2
<b>Usual activities</b>						
No problem	570	79.6	216	74.5	354	83.1
Slight problems	112	15.6	55	19.0	57	13.4
Moderate problems	22	3.1	10	3.4	12	2.8
Severe problems	12	1.7	9	3.1	3	0.7
<b>Pain/Discomfort</b>						
No problem	406	56.7	153	52.8	253	59.4
Slight problems	259	36.2	107	36.9	152	35.7
Moderate problems	47	6.6	27	9.3	20	4.7
Severe problems	4	0.6	3	1.0	1	0.2
<b>Anxiety/Depression</b>						
No problem	510	71.2	190	65.5	320	75.1
Slight problems	173	24.2	80	27.6	93	21.8
Moderate problems	27	3.8	18	6.2	9	2.1
Severe problems	6	0.8	2	0.7	4	0.9
	<b>Mean</b>	<b>SEM</b>	<b>mean</b>	<b>SEM</b>	<b>Mean</b>	<b>SEM</b>
EQ-5D-5L Index	.9333	.00440	.9162	.00816	.9449	.00481
EQ VAS	81.50	0.486	82.80	0.741	80.61	0.640

**Table 3** Comparison of HRQL between quitter and non-quitter groups by adjusting age and heaviness of smoking index (n =715)

	HRQLHealth				n
	Observed Mean	Adjusted Mean	SD		
Quitter group	80.61	80.61	13.23		425
Non-quitter group	82.80	82.80	12.62		290
Source	SS	df	MS	MS	F
Age	13161.75	3	4387.25	4387.25	31.53
Heaviness of smoking index	769.22	2	384.61	384.61	2.76
Continuous abstinence for six months	1312.84	1	1312.84	1312.84	9.44* (p=.002)
Error	97820.11	703	139.15	139.15	

Note. R<sup>2</sup> = .191, Adj. R<sup>2</sup> = .179, \*p<.05

**DISCUSSION**

In this study, the six-month continuous abstinence rate (CAR) in smokers receiving services from the SMART quit clinics was 40.60% with the 71.5% of responder rate (RR) and 29.03% as an Intention-To-Treat (ITT) approach where all non-respondents are considered to be smoking.

This abstinence rate is higher than that achieved by the Thai National Quitline in 2015<sup>31</sup> (which was 33.1%). However, a cross-sectional study in 2016 indicated that the six-month CAR in smokers calling the Thai National Quitline was 51.5%<sup>20,21</sup> which could be explained by the influence of numbers of follow-up. It should be noted that these results should not be compared to some previous studies because of differences in study population and self-report measures of cessation. The study also showed that the participants did not report high self-confidence to quit smoking, a significant predictor in smoking abstinence in previous research.<sup>21,32</sup> Also, first three reasons motivating them to quit smoking included health concerns, family request, and advice from health professionals. This suggests that nurses may have an important ‘window of opportunity’ to design appropriate tobacco cessation intervention that promote smokers’ confidence to abstain from smoking.

As to HRQL, the participants in this study had an average EQ-5D-5L index of 0.93, higher than Thai patients with chronic diseases (0.86± 0.14).<sup>24</sup>

A possible explanation could be that more than half of the participants were young adults and middle-aged adults and less than half did not have health conditions. The results showed that the mean EQ-5D-5L index of the quitters was less than that of the non-quitters and this is not consistent with A previous study. A cross-sectional study by Rezaei et al.<sup>15</sup> found a mean EQ-5D index score of the former smokers (0.70 ± 0.22) was higher than those of the current smokers (0.69±0.17). However, our findings demonstrated that the quitters reported slightly more problems in the EQ-5D dimensions. This might be due to differences in the background characteristics of participants, such as age and nicotine dependence. Additionally, our participants who could quit smoking were older than those who could not, and the proportion of the first group reporting an illness was higher than the second group. We did not collect data of EQ-5D-5L before quitting; thus, we could not assess changes in HRQL. Levy et al. reported a significant improvement in *all* EQ-5D *dimensions* among smokers who remained abstinent at 6 months after hospitalization.<sup>16</sup>

In this study, the mean EQ-VAS score of all participants (81.50± 13.01) was slightly lower than the Thai national average.<sup>26</sup> The mean EQ-VAS score of the quitters who remained abstinent at 6 months was significantly higher than that of the non-quitters after controlling for age and heaviness smoking

index. These findings are similar to those in previous studies using the same instrument and different health-related quality of life (HRQL) instruments, such as the SF-36. For instance, a study in Taiwan by Chen et al.<sup>22</sup> found that the mean VAS of long-term quitters (abstained from cigarettes  $\geq 6$  months) was 79.20% and long-time former smokers, quitting for a short or long time showed higher EQ-VAS scores than continuing smokers. Similarly, other studies found that continuing smokers reported lower HRQL, as assessed by the SF-36, than former and never smokers.<sup>14, 20, 21</sup>

This study has some limitations. First, since it is a cross-sectional study, no conclusions on causality can be drawn. In addition, recall bias may have occurred in this study as we had no information on the health status of the participants before they quit smoking. Moreover, smoking cessation was evaluated using self-report only and was not biochemically confirmed.

## **Conclusion and Implication for Nursing Practice**

This is the first study to provide substantial data on health-related quality of life in Thai smokers receiving treatment from hospital-based cessation clinics. The current findings suggest that the SMART Quit clinics can help smokers quit and can benefit health-related quality of life. Nurses have a significant role in assisting persons to quit smoking and are key persons who run a smoking cessation service. The International Council of Nurses promotes integrating tobacco cessation interventions into regular practice,<sup>12</sup> so nurses need to implement interventions through a variety of strategies, starting with implement record keeping about patients' tobacco use in all nursing notes and regarding the provision of brief advice, extended counseling follow-up, or referral for further treatment, such as giving patients the quitline toll-free number or medication. The health conditions of

people could be used as motivating factors to quit smoking. In addition, nurses could consider HRQL assessment, using the EQ-5D-5L questionnaire due to it being both a practical and reliable instrument, and use HRQL information to advocate smokers to quit. The findings of the study can also serve as baseline for nurses or researchers in Thailand, as well as inform researchers elsewhere. Studies with prospective designs are needed to further determine the long-term effects of smoking cessation on HRQL.

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## คุณภาพชีวิตด้านสุขภาพในประชาชนผู้รับบริการเลิกบุหรี่

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**บทคัดย่อ:** แม้จะทราบกันดีว่าคุณภาพชีวิตด้านสุขภาพสามารถช่วยให้ผู้สูบบุหรี่เลิกสูบได้ แต่การศึกษาเรื่องนี้ยังมีไม่มากนัก การศึกษาภาคตัดขวางนี้ศึกษาอัตราการเลิกบุหรี่และคุณภาพชีวิตด้านสุขภาพของผู้สูบบุหรี่จำนวน 715 คน สุ่มจากผู้มารับบริการจากคลินิกเลิกบุหรี่ในโครงการเครือข่ายคลินิกฟ้าใส เก็บรวบรวมข้อมูลโดยใช้แบบบันทึกข้อมูลส่วนบุคคลจากจากเวชระเบียนและสัมภาษณ์ทางโทรศัพท์ที่ระหว่างมีนาคม ถึง กรกฎาคม 2558 เครื่องมือที่ใช้เก็บรวบรวมข้อมูลประกอบด้วยแบบบันทึกข้อมูลส่วนบุคคลและข้อมูลเกี่ยวกับการสูบบุหรี่ แบบสัมภาษณ์การเลิกบุหรี่ และแบบสอบถามคุณภาพชีวิตด้านสุขภาพซึ่งพัฒนาโดยกลุ่มนักวิจัย EuroQol ฉบับภาษาไทย วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ไครส์เคิร์ฟ และการทดสอบที ผลการวิจัยพบว่า กลุ่มตัวอย่างส่วนใหญ่เป็นเพศชาย อายุระหว่าง 25-64 ปี ส่วนใหญ่ติดนิโคตินในระดับต่ำ อัตราการเลิกบุหรี่แบบต่อเนื่องที่ 6 เดือนเท่ากับร้อยละ 40.5 กลุ่มตัวอย่างที่เลิกสูบบุหรี่อย่างต่อเนื่อง 6 เดือน มีคะแนนคุณภาพชีวิตด้านสุขภาพสูงกว่ากลุ่มที่ยังคงสูบบุหรี่อย่างมีนัยสำคัญทางสถิติ พยาบาลเป็นบุคลากรที่มีบทบาทสำคัญยิ่งที่มสุขภาพ ในการปฏิบัติ การพยาบาลเพื่อส่งเสริมการเลิกบุหรี่นั้น พยาบาลสามารถปฏิบัติได้หลากหลายวิธี อาทิ การให้คำแนะนำและบำบัดเพื่อเลิกบุหรี่แบบกระชับหรือส่งต่อเพื่อการบำบัดขั้นสูง อีกทั้งควรพิจารณาประเมินคุณภาพชีวิตด้านสุขภาพของผู้สูบบุหรี่และใช้ข้อมูลดังกล่าวในการชี้แนะเพื่อเลิกบุหรี่

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